

Amendment  
Serial No. 10/692,343

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JAN 16 2007

REMARKS

Claims 1-10 and 11-20 are pending in the application. Claim 21 is added. Claims 1, 3-5 and 7 stand rejected. Claim 1 and 11 are independent claims.

The Applicant adds a new claim 21. The support can be found in the Detailed Description portion of the specification, at page 15, line 5-7.

The Applicant wishes to thank the Examiner for indicating that claims 11-20 are allowed. The Applicant notes that the Applicant has made some minor changes to claims 12, 18, and 19, without adding additional features to or deleting features from each of the claims.

The Applicant also wishes to thank the Examiner for indicating that 2, 6, 8, and 9 would be allowed if rewritten as independent claims incorporating all features of the base and intervening claims. At this time, the Applicant, however, wishes to defer rewriting claims 2, 6, 8, and 9. The Applicant, instead, wishes to amend claim 1, as noted below.

Claim 1 stand rejected under 35 U.S.C §102(b) as allegedly being anticipated by Kurata (U.S. 5,633,962).

Claim 1 recites an optical waveguide element having a directional coupler, the directional coupler comprising “a first waveguide and a second waveguide; a first dummy waveguide; a reflector; a second dummy waveguide, wherein the directional coupler is configured such that optical signals progressing from the second waveguide to the second dummy waveguide attenuate while sequentially passing through the first dummy waveguide, the reflector, and the second dummy waveguide.”

The support can be found in the original claim 1 and FIG. 4-8.

According to the United States Court of Appeals for the Federal Circuit, a claim is anticipated only if a single prior art reference sets forth each and every features recited in the

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claim (*Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)).

In rejecting claim 1, the Patent Office asserts that the waveguide 32 of Kurata sets forth the first waveguide of claim 1; that the waveguide 34 of Kurata sets forth the second waveguide of claim 1; the reflective film 35 of Kurata sets forth the reflector of claim 1; that the extension of waveguide 32 that forms a directional coupler, the extension of waveguide 32 that is adjacent to the reflective film 35, sets forth the first dummy waveguide of claim 1; that the waveguide 34 of Kurata sets forth the second dummy waveguide of claim 1 (see the present Office Action, page 3).

Kurata, as read by the Applicant, discloses a conventional light transmitting/receiving apparatus (the "apparatus") for bidirectional light transmission. According to Kurata the apparatus is configured to input the first wavelength  $\lambda_1$  from the first end of the waveguide 32, the first end near the light emitting package 37, to transmit the first wavelength  $\lambda_1$  through the waveguide 32, and to output the first wavelength  $\lambda_1$  to the second end, to the optical fiber 39 (FIG. 1). At the same time, the apparatus is configured to input the second wavelength  $\lambda_2$  to the waveguide 32 from the second end, to couple the second wavelength  $\lambda_2$  to the waveguide 34, to transmit the second wavelength  $\lambda_2$  through the waveguide 34, to couple the  $\lambda_2$  being transmitted through the waveguide 34 to the waveguide 34, and to output the second wavelength  $\lambda_2$  to the optical fiber 34 (id.).

Further, Kurata discloses any portion of the first wavelength  $\lambda_1$  that is reflected by the boundary of the waveguide 32 and the optical fiber 44 and that may be transmitted to the waveguide 34 may be eliminated by using a reflective filter 35 that transmits the first wavelength  $\lambda_1$ , while reflecting only the second wavelength  $\lambda_2$  (column 4, line 36-42).

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As such, Kurata, at most, sets forth a light transmitting/receiving apparatus configured to (1) filter a first wavelength  $\lambda_1$  from first and second wavelengths  $\lambda_1$  and  $\lambda_2$  transmitted through one of the waveguides; (2) to filter the first wavelength  $\lambda_1$  that does not sequentially pass through the first dummy waveguide, the reflector, and the second dummy waveguide; and (3) to reflect second wavelength  $\lambda_2$  (see id.).

Kurata does not set forth or anticipate an optical waveguide element having a directional coupler, the directional coupler comprising “a first waveguide and a second waveguide; a first dummy waveguide; a reflector; a second dummy waveguide, wherein the directional coupler is configured such that optical signals progressing from the second waveguide to the second dummy waveguide attenuate while sequentially passing through the first dummy waveguide, the reflector, and the second dummy waveguide,” as recited in claim 1.

Claim 1, therefore, is patentable over Kurata.

The Applicant respectfully submits that claim 1 is patentable over Kurata based on additional grounds.

For example, claim 1 recites an optical waveguide element having a directional coupler “wherein the light source and the photodetector are connected to the first and second waveguides, respectively.”

In rejecting claim 1, the Patent Office asserts that the waveguide 32 of Kurata is equivalent to the first waveguide of claim 1 and that the waveguide 34 is equivalent to the second waveguide (the present Office Action, page 3).

However, Kurata explicitly discloses that a light source and a photodetector are not respectively connected to the waveguide 32 and the waveguide 34 of the light transmitting/receiving apparatus (FIG. 1).

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As such, Kurata does not set forth or anticipate an optical waveguide element having a directional coupler "wherein the light source and the photodetector are connected to the first and second waveguides, respectively,," as recited in claim 1.

The Applicant respectfully submits that claim 1, therefore, is patentable over Kurata.

Based on the forgoing remark, the Applicant respectfully requests withdrawal of the rejection on claim 1.

Other claims in this application are each dependent on the independent claims 1 and 11 and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration of the patentability of each on its own merits is respectfully requested.

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Should the Examiner deem that there are any issues which may be best resolved by telephone, please contact Applicant's undersigned representative at the number listed below.

Respectfully submitted,

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Date: January 16, 2007

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